AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Currently Amended): A method for supplying power to an external load, comprising:

providing a DC power source, a converter, a battery and a DC bus;

supplying DC power from the DC power source ~~and/or the battery to the DC bus~~ to the converter;

supplying DC power from the converter to the DC bus;

controlling the amount of DC power provided from the ~~DC power source~~ converter to the DC bus based on the DC power available from the DC power source, wherein the DC power source provides varying DC voltage;

controlling the amount of DC power provided from the battery to the DC bus based on the amount of DC power supplied to the DC bus from the ~~DC power source~~ converter;

maintaining a substantially constant DC voltage on the DC bus

inverting the DC voltage from the DC bus to AC voltage; and

supplying the AC voltage to the external load.

Claim 2 (Canceled).

Claim 3 (Currently Amended): The method of claim 1, wherein the controlling of DC power from the ~~DC power source~~ converter is a function of power required by the external load, whereby when the external load increases, DC power provided from the ~~DC power source~~ converter to the DC bus is increased gradually as the DC power source becomes capable of providing increased DC power.

Claim 4 (Previously Presented): The method of claim 1, further comprising electrically isolating the fuel cell from the external load.

Claim 5 (Previously Presented): The method of claim 1, wherein the controlling of the amount of DC power provided from the battery to the DC bus comprises determining if the voltage on the DC bus is below the voltage of the battery and, if so, discharging power from the battery to the DC bus, wherein the discharging flow of power from the battery to the DC bus is uncontrolled.

Claim 6 (Currently Amended): The method of claim 1, further comprising the step of supplying DC power from the ~~DC power source~~ converter to the battery, wherein the supply of DC power from the ~~DC power source~~ converter to the battery is controlled.

Claim 7 (Canceled).

Claim 8 (Original): The method of claim 1, wherein the DC power source is a fuel cell.

Claim 9 (Original): The method of claim 1, further comprising preventing current from flowing to the DC power source.

Claims 10-14 (Canceled).

Claim 15 (Currently Amended): A system for converting DC electrical voltage from a DC power source to an AC voltage, wherein the DC power source provides varying DC voltage, the system comprising:

a DC-to-AC inverter;

a DC bus coupled to the DC-to-AC inverter;

a converter ~~coupled~~ having an output connected to the DC bus and an input connected to the DC power source, said converter providing ~~that regulates~~ power ~~from the DC power source~~ to the DC bus based on the DC power available from the DC power source;

a battery; and

a device coupled to the battery and to the converter, wherein the device

controls the flow of current to and from the battery, and wherein the device controls the amount of DC power supplied from the battery to the DC bus, based on the amount of DC power provided from the DC power source to the DC bus.

Claim 16 (Original): The system of claim 15, wherein the device comprises a controllable semiconductor.

Claim 17 (Original): The system of claim 15, wherein the controllable semiconductor is a MOSFET.

Claim 18 (Original): The system of claim 17, wherein the MOSFET is coupled in anti-parallel with a diode.

Claim 19 (Original): The system of claim 18, wherein the diode is a body diode of the MOSFET.

Claim 20 (Original): The system of claim 18, wherein the diode is a Schottky diode.

Claim 21 (Original): The system of claim 17, wherein the MOSFET is operated in its active region to maintain a constant float voltage across the battery.

Claim 22 (Original): The system of claim 15, wherein the device comprises a noncontrollable semiconductor.

Claim 23 (Original): The system of claim 22, wherein the noncontrollable semiconductor is a diode.

Claim 24 (Original): The system of claim 15, wherein the converter operates to increase voltage.

Claim 25 (Original): The system of claim 15, wherein the converter is a boost converter.

Claim 26 (Original): The system of claim 15, further comprising an isolation device coupled to the DC-to-AC inverter.

Claim 27 (Original): The system of claim 26, wherein the isolation device is an electrical transformer.

Claim 28 (Original): The system of claim 15, further comprising a current protection device coupled to the DC bus and designed to prevent current from being applied to the DC power source.

Claim 29 (Original): The system of claim 28, wherein the converter reduces the current in the current protection device to a level below the level of current drawn by the power source.

Claim 30 (Original): The system of claim 15, further comprising an input filter coupled to the DC power source and to the converter.

Claim 31(Original): The system of claim 15, wherein the DC-to-AC inverter comprises an H-bridge inverter.

Claim 32 (Original): The system of claim 15, wherein the DC-to-AC inverter is designed to operate with a low voltage input.

Claim 33 (Previously Presented): The system of claim 15, wherein when an increase in load demand occurs, the device permits power from the battery to flow to the DC bus to meet the increased demand until the DC power source is able to support the increased load demand.

Claim 34 (Previously Presented): The system of claim 15, wherein the converter regulates power drawn from the DC power source during load transients.

Claim 35 (Canceled).

Claim 36 (Previously Presented): The system of claim 15, wherein the converter and the device operate to maintain a substantially constant voltage on the DC bus.

Claim 37 (Original): The system of claim 15, further comprising an electrical power grid coupled to the controller.

Claim 38 (Original): The system of claim 15, wherein the DC power source is a fuel cell.

Claim 39 (Previously Presented): A device for converting electrical voltage from a fuel cell to an AC voltage, comprising:

a DC bus;

an inverter coupled to the DC bus, wherein the inverter converts DC voltage from the DC bus to an AC voltage;

a battery;

a controller device coupled to the battery and to the DC bus, wherein the controller device controls the flow of current to and from the battery, and wherein power is controlled from the battery based on DC power provided from the DC power source to the DC bus; and

a boost converter having an input connected to the fuel cell and an output connected to the controller device and the DC bus, said boost converter being operable to regulate power provided from the fuel cell to the DC bus based on the DC power available from the DC power source, wherein the boost converter provides a charging current to the battery and protects against current flowing to the fuel cell.

Claim 40 (Original): The device of claim 39, further comprising an electrical transformer for providing electrical isolation between the fuel cell and the load.

Claim 41 (Original): The device of claim 39, further comprising an electrical transformer for changing the output voltage of the inverter to another voltage.

Claim 42 (Original): The device of claim 39, further comprising an electrical transformer for providing a center tap in the output voltage.

Claim 43 (Previously Presented): The device of claim 39, wherein when an increase in load demand occurs, the inverter draws power from the battery via the controller device equal to the increased demand until the fuel cell is able to support the increased load demand.

Claim 44 (Original): The device of claim 39, wherein the inverter is an H-bridge inverter.

Claim 45 (Previously Presented): The device of claim 39, wherein the boost converter regulates power drawn from the fuel cell during load transients.

Claim 46 (Original): The device of claim 39, wherein the inverter draws power from the battery when load demands exceed a capacity of the fuel cell.

Claim 47 (Previously Presented): The system of claim 39, wherein the controller device comprises a controllable semiconductor.

Claim 48 (Previously Presented): The system of claim 39, wherein the controller device comprises a noncontrollable semiconductor.

Claim 49 (Previously Presented): The system described in claim 15, wherein the converter and the controller device maintain a substantially constant voltage across the DC bus.

Claim 50 (Canceled).